EchoLife HG520s Home Gateway

User Manual

HUAWEI TECHNOLOGIES CO., LTD.

EchoLife HG520s Home Gateway User Manual

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This product has been designed to comply with the requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

Safety Precautions

General Requirements:

- Before you install and use the device, read these safety precautions carefully and observe them during operation.
- During storage, transportation and operation of the device, keep the device dry.
- During storage, transportation and operation of the device, avoid collision and crash of the device.
- Never attempt to dismantle the device by yourself. In case of any fault, contact the appointed maintenance center for repair.
- Without prior written consent, no organization or individual is permitted to make any change to the structure or safety design of the device. Huawei Technologies Co., Ltd. is not liable to any consequences or legal issues due to such changes.
- While using the device, observe all applicable laws, directives and regulations, and respect the legal rights of other people.

Environmental Requirements:

- Place the device at a well-ventilated place. Do not dispose the device to direct sunlight.
- Keep the device clean and free of dusts.
- Place the device on a stable platform.
- Do not place any object on top of the device. Otherwise, the device may be too hot during operation. It can even be deformed or damaged by the heavy load.
- Keep at least 10 cm between the device and the closest object for heat dissipation.
- Do not place the device on or near any object that can easily catch fire, such as something made of rubber.
- Keep the device far away from any heat source or bare fire, such as a candle or an electric heater.
- Keep the device far away from any household appliance with strong magnetic field or electromagnetic field, such as a microwave oven or a refrigerator.

Operating Requirements:

- Do no let a child operate the device without guidance.
- Do not let a child play with the device or any accessory. Swallowing the accessories may lead to peril.
- Use the accessories provided or authorized by the manufacturer only.
- The power supply of the device shall meet the requirements of the input voltage of the device.
- Before plugging or unplugging any cable, shut down the device and disconnect it from the power supply.
- While plugging or unplugging any cable, make sure that your hands are completely dry.
- Do not tread on, pull or over-bend any cable. Otherwise, the cable may be damaged, leading to malfunction of the device.
- Do not use an old or a damaged power cable.
- During lightning weather, stop using the device and disconnect it from the power supply. Unplug the power plug and the ADSL twisted pair, to avoid lightning strike.
- If the device is not used for a long time, disconnect it from the power supply and unplug the power plug.
- In any of the following cases, stop using the device, disconnect it from the power supply and unplug the power plug immediately: there is smoke emitted from the device, or there is some abnormal noise or smell. Contact the specified maintenance center for repair.
- Avoid any object (such as metal shavings) from entering the device from the heat dissipation intakes.
- Do not scratch or abrade the shell of the device. This may lead to malfunctions of the device. The shed painting material may also lead to skin allergy.

Cleaning Requirements:

- Before cleaning the device, stop using it and disconnect it from the power supply.
- Use a piece of soft cloth to clean the device.

- Keep the power plug clean and dry. Using a dirty or wet power plug may lead to electric shock or other perils.

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Chapter 1 Introduction

This chapter introduces functions and structure of the EchoLife HG520s Home Gateway (hereinafter referred to as the HG520s).

1.1 Functions and Features

The HG520s is a type of Asymmetric Digital Subscriber Line (ADSL) terminal. Data, video and audio are transmitted through the common telephone line at a higher rate by the HG520s.

The features of the HG520s are:

- High transmission rate: The maximum downstream rate is 24 Mbit/s; the maximum upstream rate is 1.2 Mbit/s.
- Strong network adaptability: The HG520s can be interconnected with multiple Digital Subscriber Line Access Multiplexer (DSLAMs).
- Strong maintainability: The HG520s provides multiple indicator status, which is convenient to locate failures.
- Easy operation: The HG520s has a simple operation for the configuration page.

1.2 Hardware Configuration

This section introduces the appearance and the structure of the HG520s.

Note:

Figures of the front panel and the rear panel are only for your reference.

1.2.1 Front Panel

Figure 1-1 shows the front panel of the HG520s.

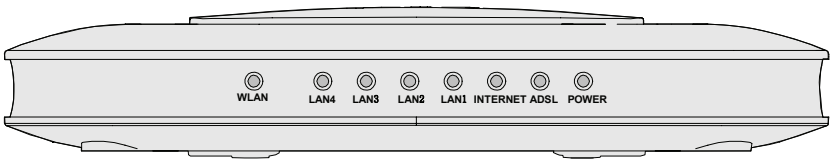


Figure 1-1 Front panel of the HG520s

Table 1-1 shows indicators in the front panel.

Table 1-1 Indicators in the front panel

Indicator	Color	Status	Description
WLAN	Green	On	The connection is established in the **WLAN** interface.
		Blinking	There are data being transmitted in the **WLAN** interface.
		Off	No connection is established in the **WLAN** interface.

Indicator	Color	Status	Description
LAN1–4	Green	On	The connection is established in the LAN interface.
		Blinking	There are data being transmitted in the LAN interface.
		Off	No connection is established in the LAN interface.
INTERNET	Green	On	The embedded PPPoE and PPPoA dial-ups of the HG520s are successful, but there is no data transmission.
		Blinking	There are data are being transmitted in the **INTERNET** interface.
		Off	The HG520s is in the bridge mode or the PPPoE/PPPoA connection is not established.
ADSL	Green	On	The DSL connection is established.
		Blinking	There are data being transmitted in the DSL connection or the DSL connection is being activated.
		Off	The telephone line is not connected or the DSL connection is not established.
POWER	Green	On	The HG520s is powered on.
		Off	The HG520s is powered off.
Note: *PPPoE = Point-to-Point over Ethernet* *PPPoA = Point-to-Point over ATM* *LAN = Local Area Network* *WLAN = Wireless Local Area Network*			

📖 Note:

If the HG520s fails to activate, it tries again after an interval. The ADSL LINK indicator is off during the interval, lasting for about 1 minute.

1.2.2 Rear Panel

Figure 1-2 shows the rear panel of the HG520s.

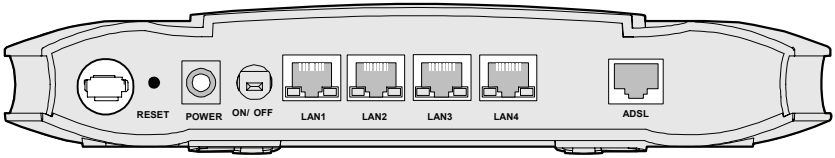


Figure 1-2 Rear panel of the HG520s

Table 1-2 shows interfaces and buttons in the rear panel.

Table 1-2 Interfaces and Buttons in the rear panel

Interface/Button	Description
Antenna	Antenna for wireless Internet access.
RESET	To restart the HG520s, press the **RESET** button and release it within three seconds. To restore the default settings of the HG520s, press the **RESET** button and release it after three seconds. Once you use this function, all your custom settings will be lost. Therefore, please be careful when using it.
POWER	Connect to the power adapter.
ON/OFF	Power on/off the HG520s.
LAN 1–4	Ethernet interfaces. To connect LAN network devices (such as a computer and a switch).
ADSL	ADSL interface. To connect the telephone jack or a splitter through a telephone line.

1.2.3 Splitter

The external splitter can efficiently reduce the signal disturbance on the telephone line. When voice and data are transmitted through the

same telephone line at the same time, you need an external splitter to separate the voice and data signals:

- LINE: Connecting to the phone jack on the wall.
- PHONE: Connecting to the telephone.
- MODEM: Connecting to the ADSL interface of the HG520s.

Chapter 2 Installation of the HG520s

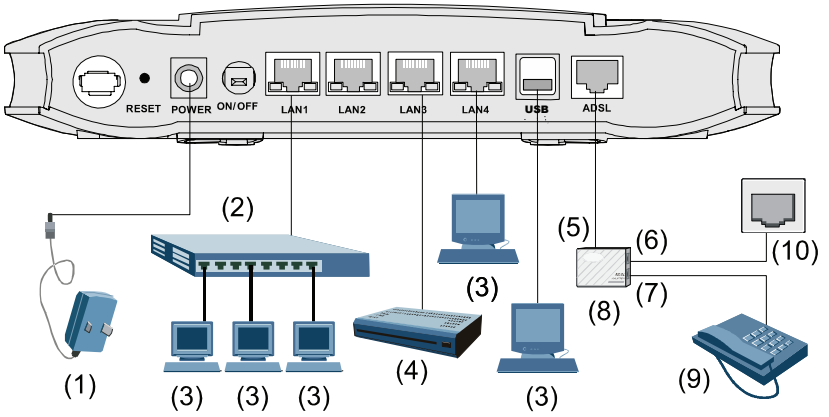
This chapter introduces the installation when the HG520s is used for the first time.

2.1 Preparation

Connect your computer with the HG520s through the Ethernet interfaces. Before installing the HG520s, make sure that your computer is equipped with the network card

2.2 Connecting the HG520s

Figure 2-1 shows the connection of the HG520s.



(1) Power adaptor (2) Switch (3) Computer

(4) Set-Top Box (5) Modem port of splitter (6) Line interface of splitter

(7) Phone interface of splitter (8) Splitter (9) Phone

(10) Phone Jack

Figure 2-1 Connection of the HG520s

Connect the HG520s as follows:

⚠ Caution:

Before connecting the HG520s, power off the HG520s and your computer.

---

(1) Connect the interfaces of the splitter with the corresponding equipment by using the telephone line.

- Connect the LINE interface of the splitter with the telephone jack on the wall.
- Connect the **MODEM** interface of the splitter with the **ADSL** interface of the HG520s.
- Connect the **PHONE** interface of the splitter with the interface of the telephone line.

(2) Connect the Ethernet interface of the HG520s with the Ethernet interface of the computer by using Ethernet cable.

(3) Plug the output end of the provided power adapter into the power input interface of the HG520s; plug the other end into the power socket.

(4) Press the **POWER** button of the HG520s in the rear panel to power on the HG520s.
Check the power indicator in the front panel of the HG520s. If it is on, the HG520s is power on.

2.3 Establishing Configuration Environment

You can configure the HG520s on the Web configuration page. This section describes the process to establish the configuration environment of the HG520s.

2.3.1 Parameter Configuration

Before establishing the configuration environment, set the following parameters.

Table 2-1 Parameters for the configuration environment

Name	Description
Administrator username and password of the HG520s	Default: ● Username: **admin** ● Password: **admin**

IP address and subnet mask of the LAN of the HG520s	Default: ● IP address: **192.168.1.1** ● Subnet mask: **255.255.255.0**
IP address and subnet mask of the computer	Set them to be in the same network segment as the IP address of the LAN of the HG520s For example: ● IP address: **192.168.1.100** ● Subnet mask: **255.255.255.0**

2.3.2 Steps

Follow the steps to establish the configuration environment.

Step	To...	Do...
1	Connect the HG520s	For details to connect the HG520s, refer to 2.2 "Connecting the HG520s."
2	Make sure not to use the proxy server.	The process to unselect this function is described as follows (taking Internet Explorer 6.0 as an example): (1) Start the Internet Explorer. Select **Tools** > **Internet Options...** to display the **Internet Options** dialog box. (2) Select the **Connections** tab. Click **LAN Settings...**. (3) Deselect **Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections)**.
3	Log in to the Web configuration page	(1) In the address bar of Internet Explorer, enter **http://192.168.1.1** (the default IP address of the HG520s). Then press **Enter**. The login window is displayed. (2) Enter the username and the password of the administrator in the login window. When the password is authenticated, you can access the Web configuration page.

📖 Note:

After configuring the parameters of the HG520s, configure the computer according to the configuration status of the HG520s. For details, please refer to Chapter 3 "Service Configuration."

2.4 Web Configuration Page

The Web configuration page of the HG520s is divided into two parts:

- The navigation tree: It is on the left side of the page. It provides you to access to different configuration pages.
- Configuration area: It is on the right side of the page.

Chapter 3 Service Configuration

This chapter introduces the method for configuring the HG520s.

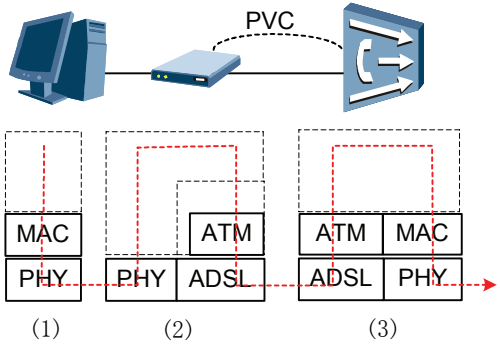
Note:

The figures in the following configuration operations are only for your reference.

3.1 Method

3.1.1 Protocol Model

Figure 3-1 shows the protocol model of for the connection between the HG520s and the DSLAM at the office end.



(1) Computer (2) HG520s (3) DSLAM

Figure 3-1 Protocol model

The transmission between the HG520s and the DSLAM is based on the asynchronous transfer mode (ATM). In the service configuration

of the HG520s, you need to configure parameters, for example, the permanent virtual channel (PVC).

3.1.2 Steps

The service modes of HG520s can be realized by configuring the corresponding working parameters.

The steps to realize a service mode are described as follows.

Step	To...	Do...
1	Establish the configuration environment	Refer to "2.3 Establishing Configuration Environment."
2	Configure the HG520s	(1) Select the PVC to be configured. (2) Select the service mode of this PVC and configure the parameters of the PVC. (3) Configure functions according to the requirements. For example, configure the DHCP function. (4) Save the configuration and reboot the HG520s.
3	Configure your computer	Configure the parameters of the network card for the computer or install the dial-up software in the computer according to the service mode of the HG520s.
Note: *DHCP = Dynamic Host Configuration Protocol*		

3.2 Service Modes of the HG520s

The HG520s supports multiple service modes and the configuration of the DSLAM at the office end should be considered when you select a service mode. Table 3-1 lists the service modes of the HG520s.

Table 3-1 Service modes of the HG520s

Service Mode	Working Method	Configuration
Bridge	• Take the HG520s as bridge equipment. • Use the PPPoE dial-up software of the computer for dialing.	Refer to 3.3 "Configuring the Bridge Mode."
PPPoE	• Take the HG520s as a router. • Use the embedded PPPoE dial-up software of the HG520s for dialing. • Use the PPPoE encapsulation mode to encapsulate the packets.	Refer to 3.4 "Configuring the PPPoE Mode."
PPPoA	• Take the HG520s as a router. • Use the PPPoA dial-up software of the HG520s for dialing. • Use the PPPoA encapsulation mode to encapsulate the packets.	Refer to 3.5 "Configuring the PPPoA mode."
RFC2684B	• Take the HG520s as a router. • Use the static IP address or the IP address dynamically allocated by the ISP. • Use the IPoE/IPoA encapsulation mode to encapsulate the packets.	Refer to 3.6 "Configuring the RFC2684B Mode."
RFC2684 (IPoA)	• Take the HG520s as a router. • The HG520s uses the static public IP address to access the Internet. • Use the IPoA encapsulation mode to encapsulate the packets.	Refer to 3.7 "Configuring the RFC2684 (IPoA) Mode."
Note: *ISP = Internet Service Provider* *IPoA = Internet Protocol over ATM*		

⚠ Caution:

Some parameters are validated only after they are saved and the HG520s is rebooted. Follow the prompt in the configuration page to perform this operation.

3.3 Configuring the Bridge Mode

In the bridge mode, the HG520s serves as a bridge. You need to install the Point to Point Protocol (PPP) dial-up software to realize the dial-up access to the Internet.

This section describes the process to configure the HG520s to work in the bridge mode and the process to configure your computer to access the Internet through the HG520s.

3.3.1 Preparation

Table 3-2 shows the configuration for the bridge mode.

Table 3-2 Configuration for the bridge mode

Name	Configuration
PVC mode	Bridge
Encapsulation	RFC2684
VPI/VCI	Provided by the ISP
Multiplex	Provided by the ISP
PPP dial-up software	Install the PPP dial-up software on your computer to access the Internet (The Windows XP operating system is provided with the PPP dial-up software)
Username and password for the PPPoE dial-up	Provided by the ISP

Name	Configuration
Note: *VPI = Virtual Path Identifier* *VCI = Virtual Channel Identifier*	

3.3.2 Steps

Configure the following equipment:

- The HG520s
- Your computer

1. Configuring the HG520s

Follow the steps:

(1) Log in to the Web configuration page of the HG520s. For the procedure, refer to "2.3 Establishing Configuration Environment."

(2) Select **Basic** > **WAN Setting** in the navigation tree to display the WAN configuration page.

(3) In the WAN configuration page, select the PVC that needs to be configured.

(4) Set **Mode** to **Bridge**. Configure relevant parameters according to the values in the Table 3-2.

(5) Click **Submit**.

2. Configuring your computer

After completing the configuration of the HG520s, you need to install the PPP dial-up software to access the Internet.

The Windows XP (Professional) operating system has a embedded PPPoE dial-up software. To set up a dial-up connection in Windows XP system, do as follows:

(1) Select **Start** > **All Programs** > **Accessories** > **Communications** > **Network Connections**.
(2) Click **Create a new connection** in the displayed page.
(3) Click **Next** in the **New Connection Wizard** dialog box.
(4) Select **Connect to the Internet** and click **Next**.
(5) Select **Set up my connection manually** and click **Next**.
(6) Select **Connect using a broadband connection that requires a username and password** and click **Next**.
(7) Enter the name of the connection. You can name it as you like. Then click **Next**.
(8) Select an option from **Anyone's use** or **My use only** and click **Next**.
(9) Enter the username and password. Then click **Next**.
(10) Click **Finish**.

3.4 Configuring the PPPoE Mode

In the PPPoE mode, the HG520s uses the embedded PPP dial-up software for dialing. The HG520s serves as a router to connect your computer to the Internet.

This section describes the process to configure the HG520s to work in the PPPoE mode and the process to configure your computer to access the Internet through the HG520s.

3.4.1 Preparation

Table 3-3 shows the configuration for the PPPoE mode.

Table 3-3 Configuration for the PPPoE mode

Name	Configuration
PVC mode	Routing
Encapsulation	PPPoE
Default route	Enable
VPI/VCI	Provided by the ISP

Name	Configuration
Multiplex	Provided by the ISP
Username and password for the PPPoE dial-up	Provided by the ISP
DHCP mode of the HG520s	Enable the DHCP server

📖 Note:

After the DHCP server is enabled, the HG520s allocates the private IP address for the computer.

3.4.2 Steps

1. Configuring the HG520s

Follow the steps described as follows:

(1) Log in to the Web configuration page. For the procedure, refer to 2.2 (4)"2.3 ."

(2) Select **Basic** > **WAN Setting** in the navigation tree to display the WAN configuration page.

(3) In the WAN configuration page, select the PVC that needs to be configured.

(4) Set **Mode** to **Routing**.

(5) Set **Encapsulation** to **PPPoE**. Configure the relevant parameters according to the values in the Table 3-3.

(6) Fill in the username and the password (provided by the ISP).

(7) Click **Submit**.

(8) Select **Basic** > **DHCP** in the navigation tree to display the DHCP configuration page.

(9) Set **DHCP** to **Server** in the DHCP configuration page.

(10) Click **Submit**.

2. Configuring Your Computer

Configure the network card for your computer, to enable the computer to automatically obtain information such as the IP address and the gateway.

3.5 Configuring the PPPoA mode

In the PPPoA mode, the HG520s uses the embedded PPP dial-up software for dialing.

Configuring the PPPoA mode is similar to configuring the PPPoE mode. The only difference is that you have to select **PPPoA** in the PVC configuration mode to configure PPPoA and select **PPPoE** to configure PPPoE. For details, refer to 3.4 "Configuring the PPPoE Mode."

3.6 Configuring the RFC2684B Mode

This section describes the process to configure the HG520s in the RFC2684B mode and the process to configure your computer to access the Internet through the HG520s.

3.6.1 Preparation

Table 3-4 shows the configuration for the RFC2684b mode.

Table 3-4 Configuration for the RFC2684B mode

Name	Configuration
PVC mode	Routing
Encapsulation	RFC2684B
Default route	Enable
WAN IP address/subnet mask	There are two methods: ● Obtain IP address automatically ● Use the static IP address
VPI/VCI	Provided by the ISP
Multiplex	Provided by the ISP

Name	Configuration
DHCP mode of the HG520s	Enable the DHCP server

3.6.2 Steps

1. Configuring the HG520s

Follow the steps described as follows:

(1) Log in to the Web configuration page. For the procedure, refer to 2.2 (4)"2.3 Establishing Configuration Environment."

(2) Select **Basic** > **WAN Setting** in the navigation tree to display the WAN configuration page.

(3) In the WAN configuration page, select the PVC that needs to be configured.

(4) Set **Mode** to **Routing**.

(5) Set **Encapsulation** to **RFC2684B**. Configure the relevant parameters according to the values in the Table 3-4.

(6) Click **Submit**.

(7) Select **Basic** > **DHCP** in the navigation tree to display the DHCP configuration page.

(8) Set **DHCP** to **Server** in the DHCP configuration page.

(9) Click **Submit**.

2. Configuring Your Computer

Configure the network card for your computer, to enable the computer to automatically obtain information such as the IP address and the gateway.

3.7 Configuring the RFC2684 (IPoA) Mode

Configuring the RFC2684 (IPoA) mode is similar to configuring the RFC2684 (IPoA) mode. The only difference is that you have to select **RFC2684 (IPoA)** in the PVC configuration mode to configure IPoA. For details, refer to 3.6 "Configuring the RFC2684B Mode."

3.8 Configuring the Wireless Mode

In the Wireless mode, the HG520s makes you access the Internet without connecting a cable.

This section describes the process to configure the HG520s to work in the Wireless mode and the process to configure your computer to access the Internet through the HG520s.

3.8.1 Preparation

Table 3-5 shows the configuration for the Wireless mode.

Table 3-5 Configuration for the Wireless mode

Name	Configuration
Access point	Enable
Channel ID	Select your country and district
Authentication type	There are three types: ● OpenSystem ● WEP-64Bits/WEP-128Bits ● WPA-PSK/WPA2-PSK
802.11b/g	There are three types: ● 802.11b ● 802.11g ● 802.11b/g

Name	Configuration
Encryption	There are two types (found in the authentication type of WPA-PSK/WPA2-PSK): • TKIP • AES

3.8.2 Steps

Follow the steps described below:

(1) Log in to the Web configuration page. For the procedure, refer to "2.3 Establishing Configuration Environment."

(2) Select **Basic** > **Wireless LAN** in the navigation tree to display the Wireless configuration page.

(3) In the Wireless configuration page, enable the Access Point and configure the relevant parameters according to the values in Table 3-5.

(4) Select one of the **Authentication Type**. Configuring the mode of **OpenSystem** in Figure 3-2, the mode of **WEP-64Bits/WEP-128Bits** in Figure 3-3, the mode of **WPA-PSK/WPA2-PSK** in Figure 3-4.

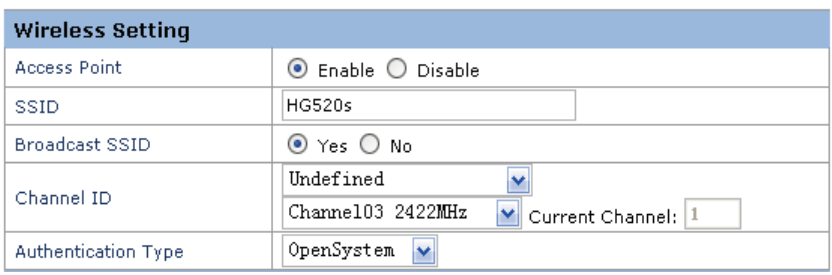


Figure 3-2 Configuring the mode of OpenSystem

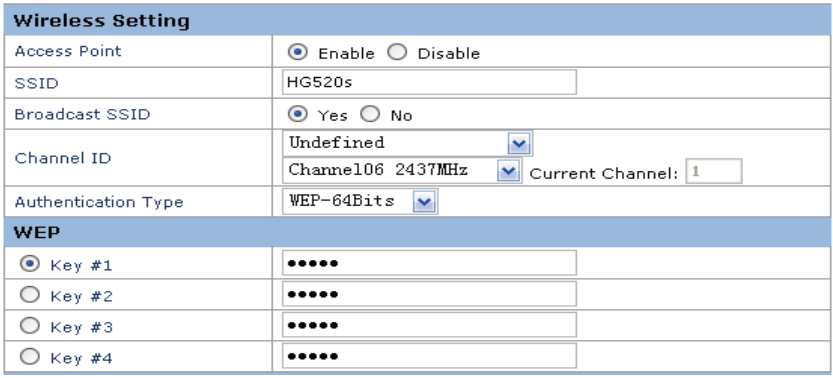


Figure 3-3 Configuring the mode of WEP-64Bits/WEP-128Bits

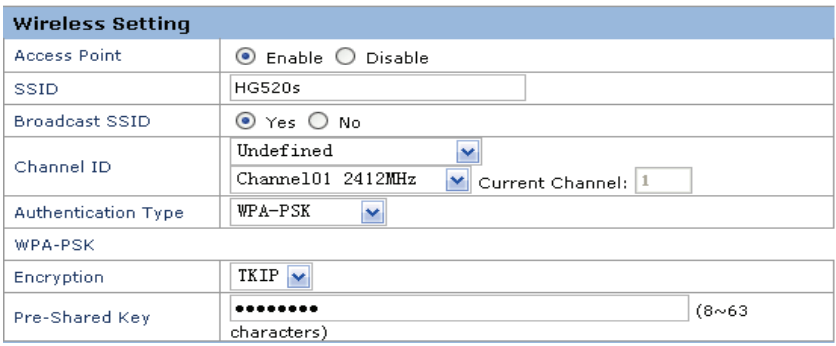


Figure 3-4 Configuring the mode of WPA-PSK/WPA2-PSK

(5) Configure the wireless MAC address filter in the Figure 3-5. Then Click **Submit**.

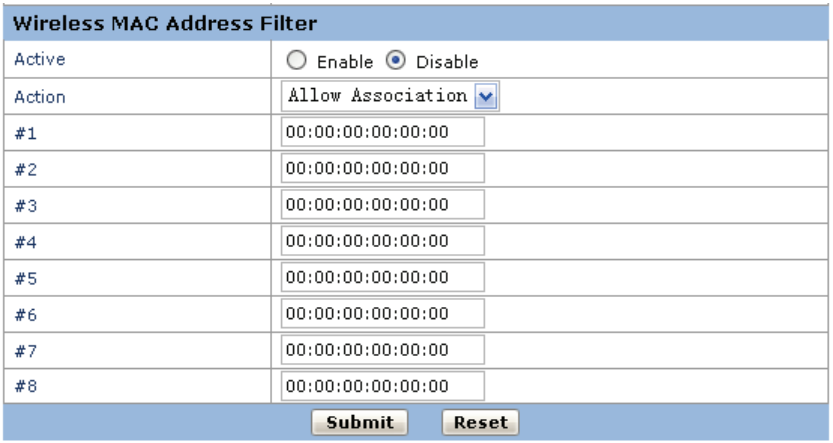


Figure 3-5 Configuring the wireless MAC address filter

Chapter 4 Advanced Configuration

This chapter introduces the method for deploying the advanced configuration of HG520s.

4.1 Preparation

Follow the steps described below:

(1) Log in to the Web configuration page of HG520s. For the procedure, refer to "2.3 Establishing Configuration Environment."

(2) Select **Advanced Configuration** in the navigation tree to display the advanced configuration page.

4.2 Configuring the RIP

You can enable the routing list to be automatically updated through configuring the RIP.

Figure 4-1 Configuring the RIP

Name	Description
RIP Direction	Select the direction of communication of RIP: None/Both/In only/Out only
RIP Version	Select a RIP version

4.3 Configuring the Security

Various types of data can be blocked to your computer, or the firewall can be enabled to promote the level of security of network.

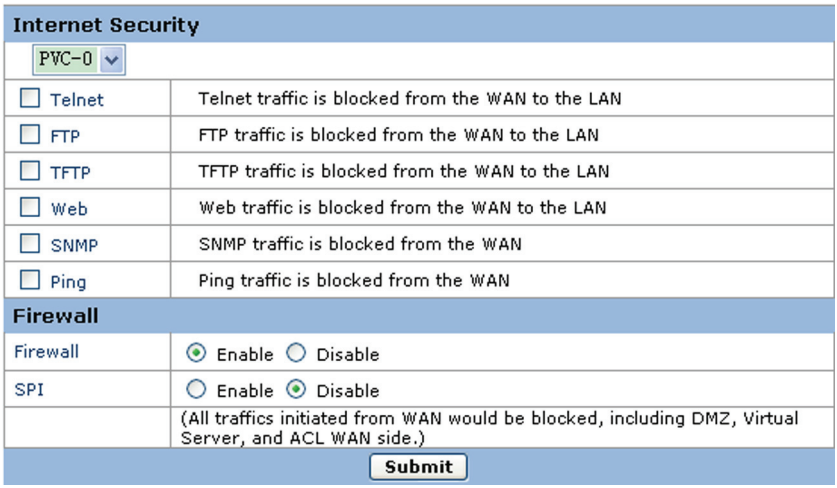


Figure 4-2 Configuring the Security

Name	Description
Internet Security	HG520s provides totally 6 types of data to block: Telnet, FTP, TFTP, Web, SNMP and Ping
Firewall	The Firewall is enabled by default; When SPI is enabled, all data form WAN will be blocked

4.4 Configuring the Filter

Through configuring the Filter, you can filter prescribed IP address, mask and ports, etc.

Name	Description
Filter Set Editing	

Name	Description
Filter Set Index	1~10
Interface	Select PVC0~PVC7/LAN; Default is “NONE”
Direction	Select Both/Incoming/Outgoing
Filter Rule Editing	
Filter Rule Index	1~6
Filter Type	Select TCP/IP, or MAC
Active	To activate a rule; Default is “No”
Source IP Address	Fill in the filtered source IP address you want
Subnet Mask	Fill in the filtered source subnet mask you want
Port Number	Fill in the filtered source port you want
Destination IP Address	Fill in the filtered destination IP address you want
Subnet Mask	Fill in the filtered destination subnet mask you want
Port Number	Fill in the filtered destination port you want
Protocol	Select TCP/UDP/ICMP

Figure 4-3 Configuring the Filter

All activated rules will be listed in “Filter Listing”.

4.5 Configuring the QoS

The objective of QoS is to provide different quality of service to tailor different requirements of applications.

🕮 Note：

QoS doesn’t increase extra bandwidth of your LAN, but helps to distribute bandwidth effectively. If your LAN has adequate bandwidth you need not configure QoS. Since the WAN interface of home gateway is ADSL2+, the upload bandwidth is low greater than the download. QoS of all home gateway only takes effect on data from WAN to LAN.

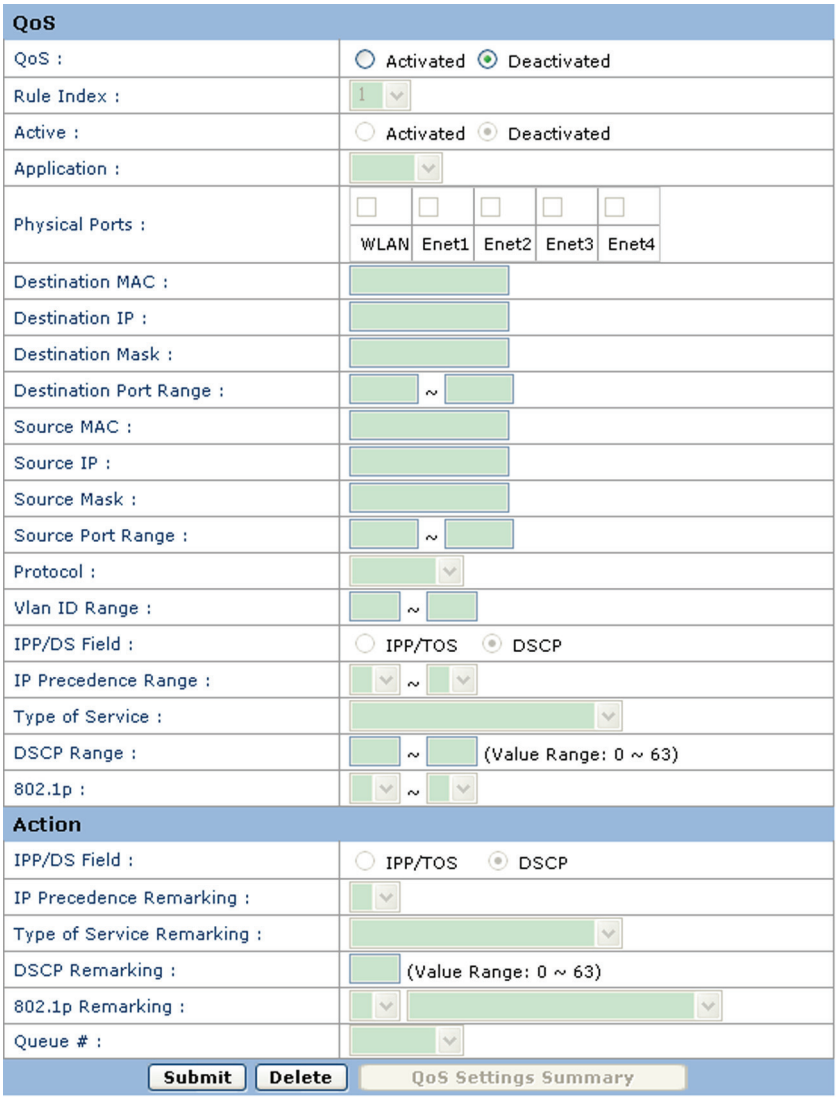


Figure 4-4 Configuring the QoS

Name	Description
QoS	
QoS	Default is deactivated
Rule Index	1~16
Active	To activate a rule;
Application	Select IGMP/SIP/H.323/MGCP/DNS/ DHCP/RIP/RSTP/RTCP/RTP
Physical Ports	Select a physical port
Destination MAC	Fill in the destination MAC
Destination IP	Fill in the destination IP
Destination Mask	Fill in the destination mask
Destination Port Range	Fill in the destination port range
Source MAC	Fill in the source MAC
Source IP	Fill in the source IP
Source Mask	Fill in the source mask
Source Port Range	Fill in the source port range
Protocol	Select TCP/UDP/ICMP/IGMP
VLAN ID Range	Fill in the VLAN ID range
IPP/DS Field	Default is DCSP
IP Precedence Range	0~7
Type of Service	Select Normal service/Minimize delay/Maximize throughput/Maximize reliability/Minimize monetary cost
DSCP Range	0~7
802.1p	0~7
Action	
IPP/DS Field	Default is DCSP
IP Precedence Remarking	0~7
Type of Service	Select Normal service/Minimize delay/Maximize throughput/Maximize reliability/Minimize monetary cost
DSCP Range	0~7

Name	Description
802.1p Remark	0~7; Select Key Net Traffic(RIP, OSPF)/Voice/Video/IGMP/Key Data
Queue	1~4; Provide different levels of priority

4.6 Configuring the Port Mapping

You can map WAN port to LAN port through configuring the Port Mapping.

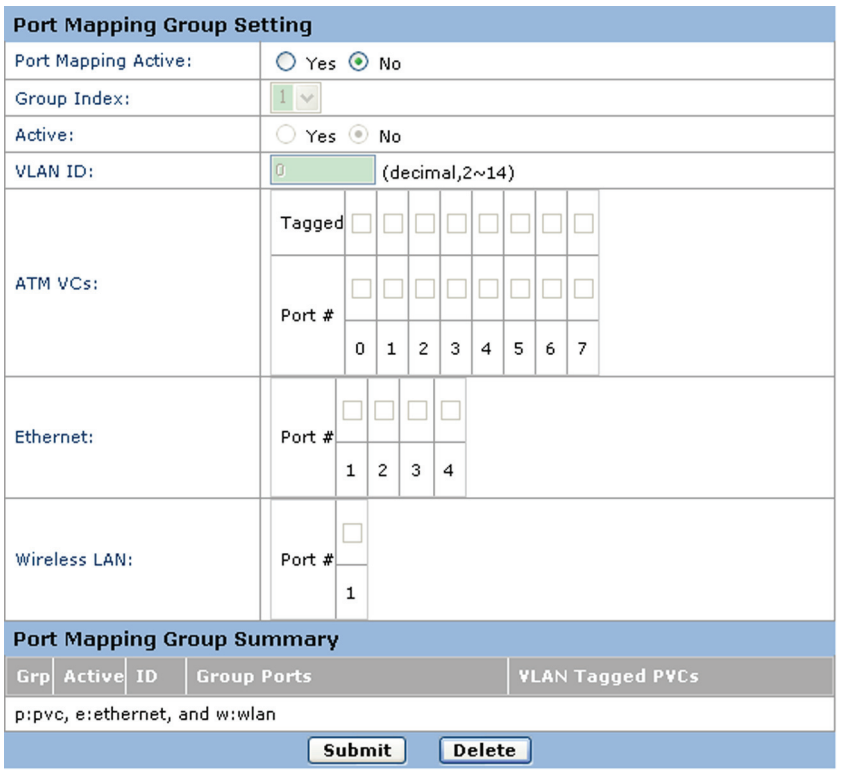


Figure 4-5 Configuring the Port Mapping

Name	Description
Port Mapping Active	To activate port mapping or not
Group Index	1~8
Active	To activate a group
VLAN ID	Fill in a decimal number; The range is 2~14
ATM VCs	Select a port and tagged; The range is 0~7
Ethernet	Select a port
Wireless LAN	Select a port

All activated groups will be listed in “Port Mapping Group Summary”.

4.7 Configuring the Timezone

You can change date and time by configuring the Timezone to keep synchronization with Internet.

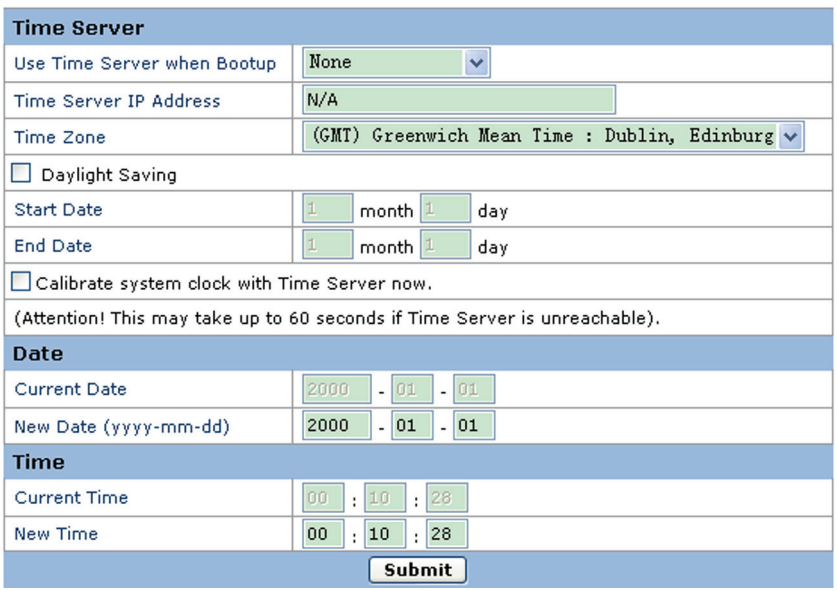


Figure 4-6 Configuring the Timezone

Name	Description
Time Server	
Time Server IP Address	Fill in IP address of a time server
Time Zone	Select your time zone
Daylight Saving	Check to fill in the start and end date
Calibrate system clock with Time Server now	Check to calibrate now
Date	
Current Date	Display your current date
New Date	Fill in a new date
Time	
Current Time	Display your current time
New Time	Fill in a new time

4.8 Configuring the ACL

You can prevent your computer from unreliable access through configuring the ACL (Access Control List).

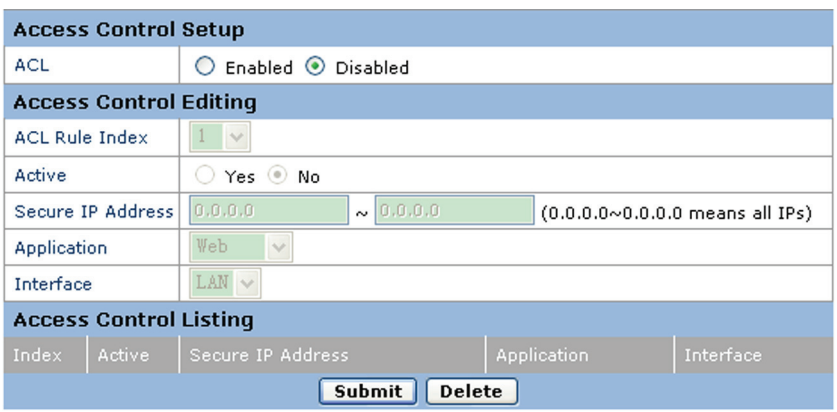


Figure 4-7 Configuring the Access Control List

Name	Description
Access Control Setup	
ACL	To enable ACL; Default is disabled
Access Control Editing	
ACL Rule Index	1~16
Active	To activate a rule
Secure IP Address	Fill in allowed IP address; 0.0.0.0 means all IPs
Application	Select Web/FTP/Telnet/SNMP/Ping/All
Interface	Select WAN/LAN

All activated rules will be listed in “Access Control Listing”.

4.9 Configuring the TR069

When the TR069 is activated, ACS (Auto Configuration Server) can manage the configuration and upgrade of devices.

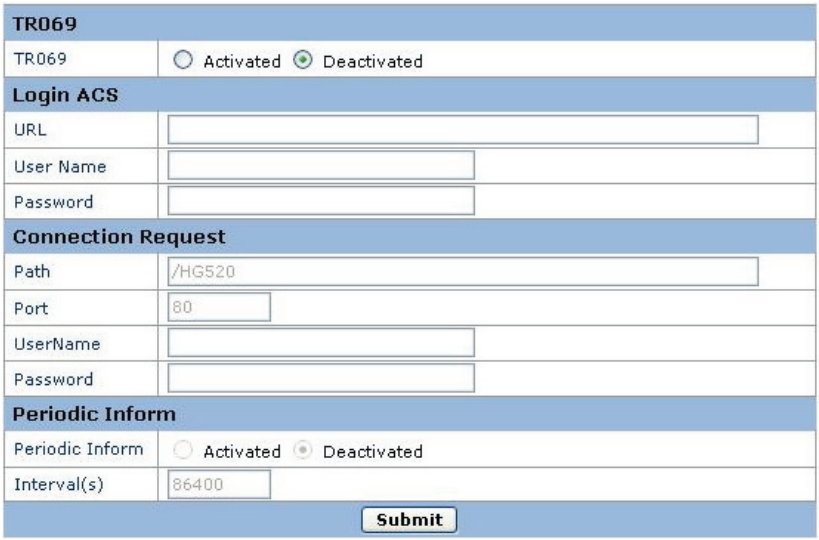


Figure 4-8 Configuring the TR069

Name	Description
TR069	
TR069	Default is activated
Login ACS	
URL	Fill in the URL of server
User Name	Fill in the user name
Password	Fill in the password
Connection Request	
Path	Fill in the path of connection
Port	Fill the port number
User Name	Fill in the user name
Password	Fill in the password
Periodic Inform	
Periodic Inform	Default is activated

Name	Description
Interval	Fill in the interval time

4.10 Configuring the UPnP

UPnP can identify PnP devices on network after activated.

Figure 4-9 Configuring the UPnP

Chapter 5 Other Settings

5.1 Changing the IP Address of the LAN of the HG520s

You can access the Web configuration page of the HG520s through the IP address of the LAN of the HG520s. The IP address of the LAN of the HG520s is configured by default, you can change it as follows:

(1) Log in to the Web configuration page of the HG520s. For the procedure, refer to "2.3 Establishing Configuration Environment."

(2) Select **Basic** > **LAN Setting** in the navigation tree to display the LAN configuration page.

(3) Enter the IP address and the subnet mask in the LAN page. Click **Submit**.

(4) Confirm the changing operation according to the prompt in the page.

📖 Note:

- You need to log in again to use the Web configuration page after configuring the IP address of the HG520s.
- Ensure that the IP address of the computer and the IP address of the HG520s are in the same network segment, then you can access the Web configuration page.

5.2 Changing the Administrator Password of the HG520s

The Web manager of the HG520s provides the password protection function to prevent illegal users from changing the configuration of the HG520s. The username and the password of the HG520s are configured by default. To change the administrator password, follow the steps:

(1) Log in to the Web configuration page of the HG520s. For the procedure, refer to 2.2 (4)"2.3 Establishing Configuration Environment."

(2) Select **Tools** > **System Management** in the navigation tree to display the system management configuration page.

(3) Find the username in the configuration page of system management. Click the corresponding editing icon to display the password configuration page.

(4) Enter the new password in the password configuration page. Click **Submit**.

5.3 Restoring the Default Factory Settings

⚠ Caution:

When you restore the default factory settings, the custom data may be lost.

There are two options to restore default factory settings:

1. Using the **Reset** button

Follow the steps:

(1) Find the **Reset** button in the rear panel of the HG520s

(2) Use a pin to press the **Reset** button and then release it after 3 seconds.

2. Using the Web Manager

Follow the steps:

(1) Select **Tools** > **Reboot** in the navigation tree to display the Save/Reboot page.
(2) Set **Reboot with** to **Factory Default Settings** in the factory setting reboot page.
(3) Click **Restart**.

5.4 Upgrading the Firmware

Follow the steps:

(1) Select **Tools** > **Firmware Upgrade** in the navigation tree.
(2) Click **Browse** in the software upgrade page and select upgrade file.
(3) Click **Upload**.

Chapter 6 Troubleshooting

6.1 Quick Failure Location

Problem	Solution
The Power indicator is not on	● Ensure that the power adapter matches the HG520s. ● Ensure that the HG520s is connected to the power supply properly. ● Ensure that the **Power** button is pressed.
The ADSL LINK indicator is not on	● Ensure that the ADSL line is connected properly. ● Ensure that the telephone line works normally. Run the check by using a telephone. ● Ensure that there is no capacitor or diode in the connection box.
The LAN indicator is not on	● Ensure that only the network cable provided with the HG520s is used. ● Ensure that the cables are connected properly. ● Ensure that the network adapter indicator of your computer is on. ● Ensure that the network adapter works normally. Check by the following procedure: Right-click **My Computer** to select **Properties**; Select **Hardware** > **Device Manager**; Check whether there are devices with the mark of **?** or **!** under **Network Adapters**. If such devices are found, uninstall and then re-install them, or change a slot for the network adapter. If the problem persists, change the network adapter.

Problem	Solution
The Internet cannot be accessed	● Ensure that all the previous problems are addressed. ● Ensure that the PVC parameters provided by the ISP are not changed. Otherwise, restore the default settings. ● Ensure that the dial-up software is correctly installed and set properly on your computer. ● Ensure that you have entered the right username and password. ● If you still cannot access the Internet after the dial-up operation, check whether the proxy server on your Internet Explorer is correctly configured. The proxy server must be disabled. ● Try different Web sites, in case some Web site fails. ● Stop the connection dialing process and retry 5 minutes later.

6.2 FAQs

1. Why does the ADSL connection break so often?

Many possible factors may cause this problem, such as faults in your ISP's access server, line disconnection and line disturbance. You can check as follows:

(1) Make sure that the ADSL line is connected properly.

(2) Keep the HG520s away from appliances with strong electric fields or magnetic fields, such as a microwave oven or a refrigerator.

(3) Make sure that no telephone or fax machine is connected directly to the ADSL line.

(4) Replace the old ISA network adapter with a new 10/100 M PCI network adapter and install the latest driver.

(5) Find help on http://www.huawei.com or contact your ISP for help.

2. What to do if the username and the password of the Web configuration page are forgotten?

If the username and the password of the Web configuration page are forgotten, configure the HG520s to the default factory settings. Use the default username and password to access the Web manager.

For restoring the default factory settings, refer to 5.3 "Restoring the Default Factory Settings." For the username and the password of the HG520s, refer to 8.1 "Default Factory Settings."

Chapter 7 Technical Specifications

Main Technical Specifications		
Standard	ADSL standard	ITU G.992.1 (G.dmt) Annex A ITU G.992.2 (G.lite) Annex A ITU G.994.1 (G.hs) ANSI T1.413 Issue 2
	ADSL2 standard	ITU G.992.3 (G.dmt.bis) Annex A ITU G.992.3 (G.dmt.bis) Annex M
	ADSL2+ standard	ITU G.992.5 Annex M
Data transfer rate	G.dmt T1.413	• The maximum downstream rate is 8 Mbit/s • The maximum upstream rate is 896 kbit/s
	G.lite	• The maximum downstream rate is 1.5 Mbit/s • The maximum upstream rate is 512 kbit/s
	G.992.5 (ADSL2+)	• The maximum downstream rate is 24 Mbit/s • The maximum upstream rate is 1.2 Mbit/s

Physical Features and Environment Requirements	
Power consumption	< 7 W
Power adapter output	12 V AC, 1 A
Temperature of the working environment	0℃–40℃ (32℉–104℉)
Humidity of the working environment	5%–95% (non-condensing)
Dimensions (L × W × H)	214 mm × 146 mm × 39 mm
Weight	360 g

Chapter 8 Appendix

8.1 Default Factory Settings

8.1.1 Common Default Parameters

Item	Default Value
Username of administrator	admin
Password of administrator	admin
IP address	192.168.1.1
Subnet mask	255.255.255.0
DHCP mode	Server
NAT	Enable

8.1.2 Default PVC Parameters

Sequence No.	Mode	VPI	VCI
0	Routing	0	100
1	Routing	0	101
3	Routing	0	103
4	Routing	0	104
6	Routing	1	139

8.2 Abbreviations

ADSL	Asymmetric Digital Subscriber Line
ATM	Asynchronous Transfer Mode
DHCP	Dynamic Host Configuration Protocol
DSLAM	Digital Subscriber Line Access Multiplex
IP	Internet Protocol
IPoA	Internet Protocol over ATM
ISP	Internet Service Provider
LAN	Local Area Network
PnP	Plug and Play
PPP	Point-to-Point Protocol
PPPoA	PPP over ATM
PPPoE	PPP over Ethernet
PVC	Permanent Virtual Channel
QoS	Quality of Service
VCI	Virtual Channel Identifier
VPI	Virtual Path Identifier
WAN	Wide Area Network

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